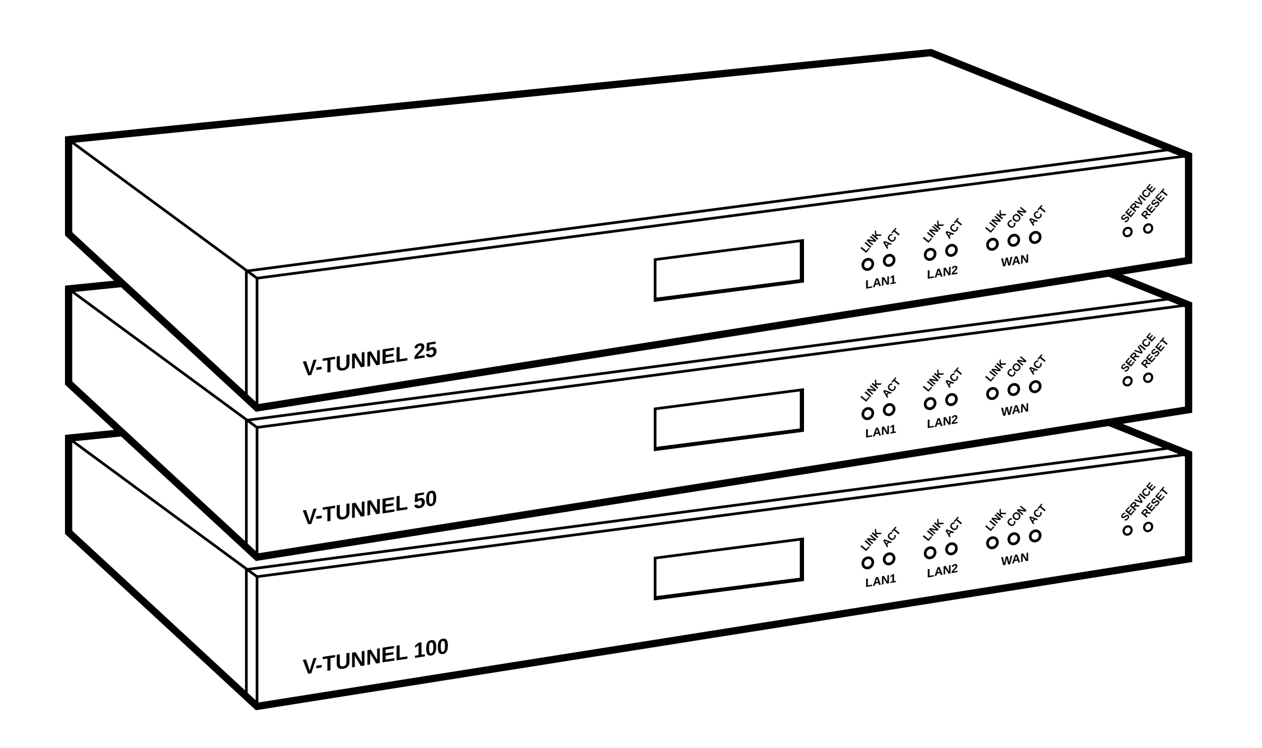


AUGUST 2000
LR7001A-25
LR7001A-50
LR7001A-100

V-Tunnel Quick Installation Guide



CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: **www.blackbox.com** • E-mail: **info@blackbox.com**

FEDERAL COMMUNICATIONS COMMISSION and CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO FREQUENCY INTERFERENCE STATEMENT

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

CE Approvals

V-Tunnel is CE approved.

Other Approvals

V-Tunnel has been approved by relevant authorities with regard to safety and EMC regulations. Please contact Black Box Technical Support for details.

Normas Oficiales Mexicanas (NOM)
Electrical Safety Statement

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El parato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equio eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

A: El cable de poder o el contacto ha sido dañado; u

B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

C: El aparato ha sido expuesto a la lluvia; o

D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

E: El aparato ha sido tirado o su cubierta ha sido dañada.

TRADEMARKS USED IN THIS GUIDE

Any trademarks mentioned in this guide are acknowledged to be the property of the trademark owners.

Quick Installation Guide

About This Guide

This guide will help you quickly install your V-Tunnel and create a secure Internet tunnel between two V-Tunnels. A complete installation guide, product details, and maintenance information can be found on the Administrator's CD-ROMs.

Before You Install the V-Tunnel

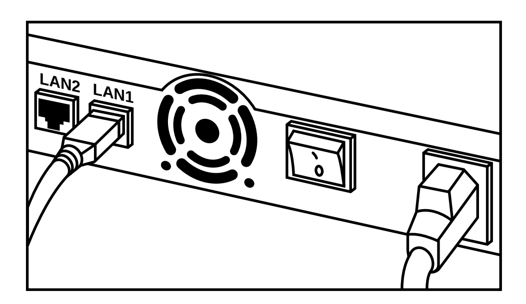
Check to make sure your package contains the following items:

- (1) V-Tunnel
- (2) CD-ROMs
- (1) power cable
- (2) Ethernet cables (straight-through)
- (2) angle irons
- (8) screws

If anything is missing or damaged, please contact Black Box at 724-746-5500.

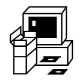
Quick Installation Instructions

1. Connect the V-Tunnel's LAN1 port directly to the Ethernet port on the administrator's workstation, using one of the Ethernet cables. (V-Tunnel autodetects whether the cable is straight-through or crossover and uses an internal switch to allow links in both cases.) Connect the V-Tunnel to the mains outlet with the power cable and put the on/off switch in the "on" position.



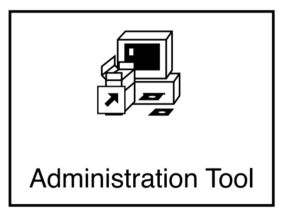
2. Insert the Administrator's CD-ROM in your CD-ROM drive. It should start automatically after a few seconds. (If it doesn't start automatically, double-click on the file **launcher.exe** in the CD-ROM's root directory.) Select **V-Tunnel** and click on the Administration Tool icon to install the tool on your workstation.

Programs



Administration Tool
Please install this tool on your workstation

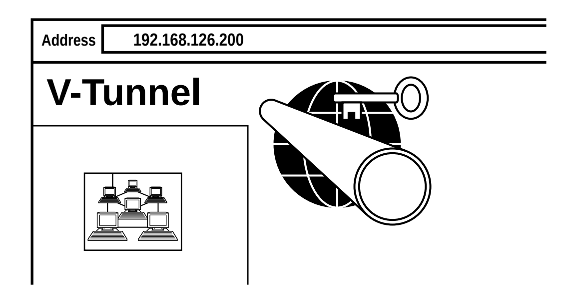
3. Run the Administration Tool from **Explore** or from the **Start** menu. Assign an IP address to the V-Tunnel (within the same range as the administrator's workstation) and enter the subnet mask. Specify a password for use when accessing the V-Tunnel.



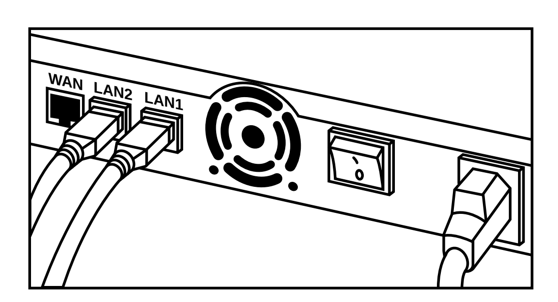
4. Check the connection to the built-in configuration interface: When you click **Finish** (in the Administration Tool), your browser should be launched, initiating V-Tunnel's interface. (If it hasn't initiated the interface, open your browser and enter the IP address specified in **Step 3**.)

   Username: **admin**

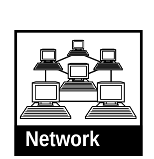
   Password: *[the password that you specified in step 3]*

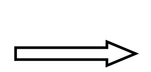


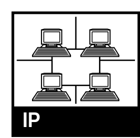
5. To connect V-Tunnel to your LAN, first turn off V-Tunnel. You may now mount V-Tunnel in a 19" rack. Connect V-Tunnel to your LAN via the LAN1 port. Connect to the router via the LAN2 port with the included Ethernet cable. Put the on/off switch in the “on” position. Access the configuration interface again (enter the IP address in your browser) to further set up V-Tunnel.

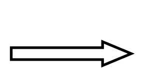


6. Click **Network** and **IP** for network configuration. Enter the globally routable IP address for LAN2, assigned by your ISP. Enter a subnet mask for LAN2. Enter the gateway IP address, reported to you by the ISP.



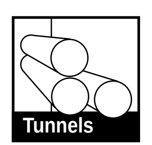


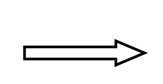


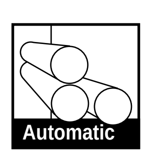


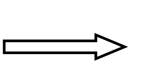
Private Interface (LAN 1)	
IP Address:	192.168.126.200
Subnet Mask:	255.255.255.0
Private Interface (LAN 2)	
IP Address:	172.17.126.200
Subnet Mask:	255.255.0.0
Gateway IP:	172.17.126.1

7. Create an automatic tunnel by clicking **Tunnels**, **Automatic**, and **Not Configured**. Specify a tunnel name and enter the remote V-Tunnel’s globally routable IP address (LAN 2). Enter a shared secret, which must be identical on both V-Tunnels (for security reasons, we recommend that the secret is more than 20 characters long).





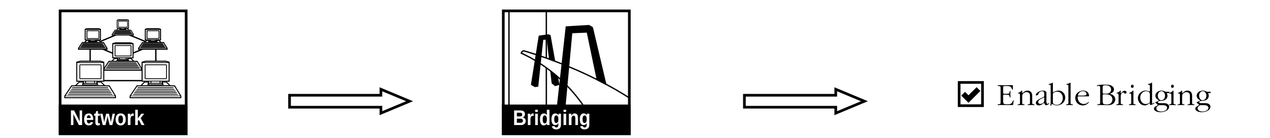




Add Tunnel

< Not Configured >

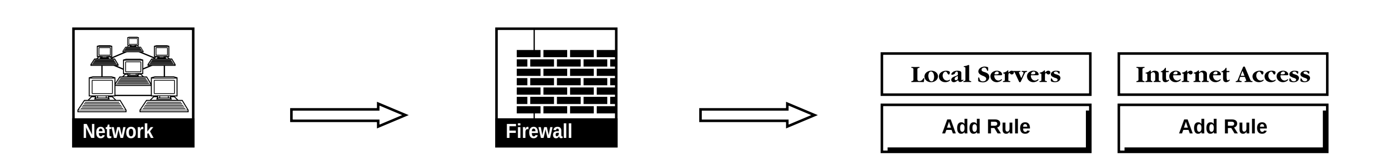
8. If network protocols other than IP are being used on the network, enable bridging. Click **Network** and **Bridging**. Check the box **Enable Bridging** and deselect the protocols that you do not use.



9. If you want to install a VPN client, click **Client** and **Add Client**. You may click the **Help** icon for details on client configuration.



10. Since the default firewall rule is ***Deny all***, no Internet traffic is allowed. Click **Network** and **Firewall**. For each Internet service that should be available, click **Local Servers** and **Add Rule** to define the services and the NetID. For each NetID that should have access to the Internet, click **Internet Access** and **Add Rule** to specify the NetID and subnet mask.





1000 Park Drive • Lawrence, PA 15055-1018 • 724-746-5500 • Fax 724-746-0746